

REMARKS

The claims have been amended to more clearly define the invention as disclosed in the written description. In particular, claims 15 and 30 have been amended for clarity.

Applicants believe that the above changes answer the Examiner's 35 U.S.C. 112, paragraph 1, rejection of claims 15, 18, 19, 30, 33-36 and 41, and respectfully request withdrawal thereof.

The Examiner has rejected claims 15, 18, 19, 30, 33-36 and 41 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent 6,708,037 to Moulisley et al. in view of U.S. Patent 6,973,062 to Han and U.S. Patent 6,850,504 to Cao et al. The Examiner has further rejected claims 15, 18, 19, 30, 33-36 and 41 as being unpatentable over Han in view of Cao et al.

Claim 15 (and similarly claim 30) includes:

"A radio communication system, comprising:

a primary station operable to periodically transmit a random access channel status message, the status message including an indicated highest available data rate on a plurality of available random access channels; and

a plurality of secondary stations operable to receive the random access channel status message,

wherein each secondary station is operable to determine which random access channel to request based on the random access channel status message; and

wherein the highest available data bit rate of the random access channel status message is indicated for each of the plurality of available random access channels in order to enable each secondary station to determine which random access channel to request."

The Mouldsley et al. patent discloses a radio communication system similar as that of the subject invention, which teaches, as noted by the Examiner, "a radio communication system, comprising: a primary station operable to transmit a random access channel status message (Claim 1, primary station signaling availability), a plurality of secondary stations operable to receive the random access channel status message (Claim 1, notice secondary stations)". However, as conceded by the Examiner, Mouldsley et al. does not specifically disclose "the status message including a bit rate and that includes an indicated highest available data rate on each random access channel of a plurality of random access channels; and wherein each secondary station is further operable to determine which random access channel to request based on the random access channel status message: and wherein the bit rate of the random access channel status message is variable in accordance with channel capacity in order to enable each secondary station to determine which random access channel to request."

The Examiner then indicates:

"Han discloses the status message including a bit rate and that includes an indicated highest available data rate on each random access channel of a plurality of random access channels (Column 4 lines 1-10, notice availability of Walsh code classes is indicated by bits

in figure 3, where each class represents a transmission rate according to Column 3 lines 60-65, highest class would correspond to MAX bit rate); and wherein each secondary station is further operable to determine which random access channel to request based on the random access channel status message (Column 5 lines 40-47, where the mobile terminals implement call access request based on the state of Walsh codes received): and wherein the bit rate of the random access channel status message is variable in accordance with channel capacity (Column 4 lines 30-37, notice multi-transmission rate) in order to enable each secondary station to determine which random access channel to request (Column 5 lines 40-47, notice mobile makes access request depending on availability of Walsh codes).";

and that:

"Cao discloses transmitting the status message only when requested (Column 4 lines 1-37 shows RACH request and in response a negotiation from the controller in the BS of figure 2)."

With regard to the Cao patent, since the limitation "transmitting the status message only when requested" has been cancelled in independent claims 15 and 30, the Cao patent is moot.

With regard to the Han patent, Applicants submit that the Examiner is mistaken. In particular, while the Examiner states that Han discloses "the status message including a bit rate and that includes an indicated highest available data rate on each random access channel of a plurality of random access channels (Column 4 lines 1-10, notice availability of Walsh code classes is indicated by bits in figure 3, where each class represents a transmission rate according to Column 3 lines 60-65, highest class would correspond to MAX bit rate)", Han, at col. 4, lines 1-10, states:

"The system information includes a link busy/idle field 10 and a code class busy/idle field 20.

"The link busy/idle field 10 indicates whether or not interference of the reverse link transmitted to the mobile terminal from the base station exceeds a preset threshold value. The code class busy/idle field 20 indicates whether or not a plurality of Walsh codes classes are available.

"For example, if the interference exceeds the threshold value, a value of one bit assigned to the link busy/idle field 10 is set to "1" that is indicative of busy state, so as to cause all the mobile terminals not to request call access."

From the above, it should be apparent that there is only one return link the availability of this link being indicated by a single bit "link busy/idle field 10". The other field "code class busy/idle field 20" indicates which of the Walsh codes in the return link are available. Hence, Han neither discloses nor suggests "a plurality of available random access channels".

Further, Han, at col. 3, line 60 to col. 4, line 1, states:

"In a communication system according to the present invention, a plurality of code classes consisting of a group of Walsh codes having different periods are classified and assigned to a base station in response to properties of current available transmission rate and data amount. Therefore, each base station transmits system information to all the mobile terminals depending on the state of an individual resource of Walsh code classes in a radio channel and traffic of a reverse link as shown in FIG. 3."

From the above, it should be apparent that Han is not rating the different Walsh codes in accordance to transmission rate. Rather, as clearly indicated in Han at col. 4, lines 18-29:

"In the present invention, a priority order is given in the order of code classes having short code length. For example, the highest priority is given to a code class having the shortest code length. In FIG. 2, high priority order is obtained as the code class goes up to 6 from 0. That is to say, the code length becomes

longer as the code class goes up to 0 while the code length becomes shorter as the code class goes up to 6. In this regard, if there are provided two or more Walsh code classes, high Walsh code class having a relatively short code length has a relative higher priority order in comparison with low Walsh code class having a relatively long code length."

From the above, it should be clear that in Han, the Walsh code classes are rated as to the length of the Walsh code, i.e., the shortest code class is 6 while the longest Walsh code class is 0. Hence, Applicants submit that there is no disclosure or suggestion in Han of "an indicated highest available data rate on a plurality of available random access channels" or "wherein the highest available data bit rate of the random access channel status message is indicated for each of the plurality of available random access channels in order to enable each secondary station to determine which random access channel to request".

Applicants therefore submit that the combination of Mousley et al., Han and Cao does not disclose or suggest the claim limitations "a primary station operable to periodically transmit a random access channel status message, the status message including an indicated highest available data rate on a plurality of available random access channels" and "wherein the highest available data bit rate of the random access channel status message is indicated for each of the plurality of available random access channels in order to enable each secondary station to determine which random access channel to request".

Accordingly, favorable reconsideration and withdrawal of the rejection of independent claim 15 under the judicially created

doctrine of obviousness-type double patenting, and under 35 U.S.C. §103 are respectfully requested. Claims 18, 19, 35 and 36 depend from and further limit allowable independent claim 15 and therefore are allowable as well.

Claim 30 has been amended in a manner similar to the amendments to claim 15. Accordingly, for similar reasons as stated with respect to overcoming the rejection of claim 15, claim 30 is believed allowable and an early formal notice thereof is requested. Claims 33, 34 and 41 depends from and further limit allowable independent claim 30 and therefore are allowable as well.

In view of the above, Applicants believe that the subject invention, as claim, is not rendered obvious by the prior art, either individually or collectively, and as such, is patentable thereover.

Applicants believe that this application, containing claims 15, 18, 19, 30, 33-36 and 41, is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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